

5. What transmission upgrade costs and back-up capacity / integration costs have Michiganders absorbed as part of the current renewables standard? Are any of those offset by other benefits of those investments?

Transmissions assets are used to transport all electricity between generation sources and end users. Therefore, few if any transmission assets are due solely to needs related to the renewable energy standard. One could look at the new transmission capacity in the thumb and claim it is related to new renewable assets located in that area of the state. However, the desire of DTE to close the Harbor Beach generating facility in the thumb would have required new transmission capacity regardless of the placement of the renewable assets.

This picture is further complicated by the impact those transmission upgrades will have on reducing the cost of wholesale power from renewable generating facilities. If those savings are subtracted from the costs over the long-term, most of those transmission upgrades will likely result in a net benefit to ratepayers, not a net cost.

### **Candidate MVP Portfolio Study**

The Midwest Interstate Transmission Organization (MISO), as part of its ongoing effort to maintain excellent reliability in Michigan and across the MISO territory has developed a process for evaluating and approving transmission grid upgrades. In January 2012, MISO completed its Candidate Multi Value Project Study. The overall finding was:

The final MVP portfolio combines reliability, economic and public policy drivers to provide a transmission solution that provides benefits in excess of its costs throughout the MISO footprint. This portfolio, when integrated into the existing and planned transmission network, resolves about 650 reliability violations for more than 6,700 system conditions, enabling the delivery of 41 million MWh of renewable energy annually to load. The portfolio also provides strong economic benefits; all zones [1] within the MISO footprint see benefits of at least 1.6 to 2.8 times their cost.<sup>1</sup>

### **Back-up Capacity**

The concept of back-up capacity is equally complex. Since the passage of PA 295 of 2008, Michigan has been in an over-capacity position due in large part to our economic downturn. Therefore, there has been no need to create back-up capacity for the relatively small amount of renewable energy that has been added to date.

Another example of the complexity of this issue is demonstrated through the investment decisions of Consumers Energy. In the past twelve months, they have reduced their use of coal-

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<https://www.midwestiso.org/Library/Repository/Study/Candidate%20MVP%20Analysis/MVP%20Portfolio%20Analysis%20Full%20Report.pdf>

fired capacity to below 45% and increased their use of natural gas fired capacity to above 25%. In addition, they have announced their desire to build additional natural gas capacity in 2013. This natural gas capacity provides flexible back-up capacity for a greater commitment to renewable energy. It is also saving ratepayers money because of the relatively low cost of natural gas. However, when the wind is blowing, renewable assets can produce energy at a marginal cost that is virtually zero, reducing the need to burn any fuel. Therefore, any exercise that tries to assign costs of natural gas between its current value of a low-cost producer and its potential backup use to renewable energy will be somewhat arbitrary.

We think a more productive analysis would closely examine the overall portfolio of investments by a utility to meet various goals and treat them as an integrated whole as opposed to assigning costs and benefits (which in many cases will not be known at the time of the investment itself).